

REMARKS

Claims 1, 23, 43 and 44 have been amended. Thus, Claims 1, 2, 5, 6, 9, 18-27, 29 and 38-44 are presented for examination. Support for the amendments to claim 1, 23, 43 and 44 may be found in the specification at page 5, lines 5-7. Thus, no new matter has been added. Reconsideration and withdrawal of the present rejection in view of the comments presented herein are respectfully requested.

Interview Summary

Applicants' representatives would like to thank Examiners Bobish and Kramer for the courtesy extended to them during the telephonic interview conducted on February 4, 2010. The substance of this interview is reflected in the amendments and remarks presented herein.

Rejection under 35 U.S.C. §103(a)

Claims 1, 2, 5, 6, 9, 18-27, 29 and 28-42 were rejected as allegedly being unpatentable over Sarshar et al. (WO 95/074414) in view of Wiltshire et al. (GB 2 239 676) in view of Cholet et al. (US 4,718,824) in view of Palmour (US 3,783,463).

The present invention relates to a system and process for pumping multiphase fluids, and in particular for boosting the production of gas and oil from low pressure wells. The need for a production boosting system is described in detail in the introductory portion of the present specification.

Sarshar discloses a system for pumping multiphase fluids using two cyclonic phase separators, a gas-gas jet pump and a liquid-liquid jet pump (see Fig. 3). However, this system does not teach or suggest a gas source comprising lift gas, export gas, high pressure steam or underground steam as recited in the present claims.

In the Office Action at page 10, the Examiner notes "that Wiltshire does not disclose the exact source of his compressor supply, and thus cannot preclude that the gases are sustainable. The language of the claims referring to a "sustainable gas source" is very broad and leaves open for interpretation the meaning of a sustainable gas source. For example, a compressor open to atmosphere would meet his claim." Thus, the Examiner has given little patentable weight to this term. The claims as amended recite particular gas sources which are neither disclosed nor suggested by Wiltshire et al. (or by any of the other cited references), thus removing any need to

interpret the meaning of a “sustainable gas source.” Thus, the compressor disclosed by Wiltshire et al, even if open to the atmosphere, is clearly not encompassed by the presently pending claims.

In addition, by combining the recited gas sources, compressor, knock-out vessel and liquid pump, unexpected advantages are obtained as described in the present specification at page 10, lines 1-18. It should be noted that the “HP gas from existing high pressure wells” noted in this section is the gas source disclosed by Sarshar et al., which is much less effective than the gas sources recited in the present claims. As noted in the cited section of the specification, such “HP gas from HP wells” can only be used “while the pressure of these wells is adequately high.” As noted, this pressure “is subject to decline in pressure during field life,” and thus, is far less reliable than the recited gas sources.

Wiltshire et al. provides no evidence that the disclosed results could be achieved, since the apparatus described therein takes gas from a T-shaped separator 11 which draws a multiphase fluid from an inlet conduit 10. In the arrangement shown in Figure 2 of Wiltshire et al., gas-rich fluid escapes up a vertical stem 12 to a first conduit 14, from where it is delivered to a compressor 16, and gas-reduced fluid flows through a horizontal branch into conduit 15 (page 2, lines 14-21). The simple T-shaped separator 11 used by Wiltshire does not provide a high degree of separation and cannot provide separated fluids of consistent quantity, composition and pressure, owing to the chaotic nature of gas-liquid mixtures. In practice, the gas-rich fluids delivered to the compressor will vary considerably in quantity, composition and pressure, and the compressor will not therefore provide a high pressure gas supply that is sustainable and of uniform pressure. .

In view of the foregoing, the disclosed unexpected properties are neither disclosed nor suggested by any of the cited references, and could not have been predicted by one having ordinary skill in the art. Thus, the unexpected results strongly support the nonobviousness of the present claims over the cited references.

In view of the comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a).

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this

application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

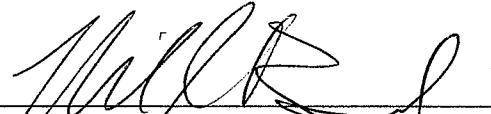
Should there be any questions concerning this application, the Examiner is invited to contact the undersigned agent at the telephone number appearing below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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